

Re: Ex Parte WT Docket 19-348 "Facilitating Shared Use in the 3.1-3.55 GHz Band"

Email September 23, 2020 addressed to: FCC Chairman Ajit Pai and Commissioners Mike O'Rielly, Brendan Carr, Jessica Rosenworcel, & Geoffrey Starks. Copied to Wireless Advisors C. Sean Spivey, Erin McGrath, Will Adams, Umair Javed, & William Davenport.

Commissioners:

Attached is a letter from the California Governor's Office of Emergency Services recognizing the contributions of radio amateurs again this year to containing the wildfires here in California. I also attach an earlier published article on the work of many radio amateurs and their networks being used to combat wild fires here. The letter updates one that we submitted with our comments.

Networks such as ours have shared the 3.4 GHz spectrum for decades. Although the primary use may change, please allow these efforts to continue in the 3.4 GHz band where technically feasible and on a non-interference basis. We make vital use of bits of spectrum that otherwise would be unused and wasted.

Respectfully submitted by,

A handwritten signature in cursive script that reads "Mike Collis". The signature is written in dark ink on a light-colored background.

Mike Collis, WA6SVT, on behalf of
Amateur Television Network (national)
P.O. Box 1594, Crestline, CA 92325

A copy of this email is being filed in Docket 19-348 per ex parte rules.

State of California
GAVIN NEWSOM, GOVERNOR

Governor's Office of Emergency Services
MARKS. GHILARDUCCI, Director



September 10, 2020

Over the years the State of California Governor's Office of Emergency Services Public Safety Communications Tactical Communications Unit has utilized Radio Amateur Television product during fire operations to gather Intel and monitor threats to communications sites being affected by fires and Fire weather events. One recent fire in southern California was the Apple Fire located near the Snow Peak which is large State Radio communications site with equipment from State microwave to Highway Patrol, CalFire and other State and local agency repeater networks. By using the ATN we were able to check fire progress around the site and how much of threat the fire was effecting the site.

Part of the backbone of the Radio Amateur Television (ATN) system utilizes the 3 Ghz Radio Amateur Spectrum and due to heavy spectrum usage in the 1.2 and 5.8GHz spectrum the 3 GHz spectrum becomes very important for Frequency Diversity supporting these networks utilized by Emergency Management Radio Amateur programs and Emergency Operations Center Operations. This letter is to support the continued use by Radio Amateurs of the 3 Ghz spectrum.

If additional information is needed or any questions, please let me know.

Thank you,

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c.c: File

EMERGENCY COMMUNICATIONS

BY WALT PALMER,* W4ALT

Fire, Fire, Ring the Bell!

The recent wildfires in California caused great angst and heartache for many in or near their paths. Homes were lost to fire. Pets and livestock perished. Some lost all but the shirts on their backs. Photographs and news footage told only part of the story. The most powerful image for me was of the Ronald Reagan Presidential Library in Simi Valley, as the Easy fire approached the 100-acre compound where the President and First Lady are buried, and the library houses SAM 27000, the presidential Boeing 707 aircraft that flew presidents and VIPs from 1962 to 1998. While working for a major alphabet TV network, I covered the White House and was fortunate to ride that very same 27000, callsign Air Force One.

As the fires raged (*Photo A*), Pacific Gas and Electric (PG&E) turned off power to areas where gusty winds and dry conditions heightened the fire risk. This affected over 1 million customers in 13 counties, many in rural areas. Millions of dollars in perishable food was lost due to refrigeration failure. People also lost the ability to communicate as both land-line and wireless phone systems failed. As cellular systems fell offline, personal cell phones lost battery power rapidly as they searched for a signal. Some people thought it wise to charge their phone batteries from their car batteries. While the practice seems like a great idea, it caused many auto batteries to fall below starting amperage. For those with electric cars, driving range suffered by using the now precious power for other uses.

Communication Issues

Public communications in affected area were reduced to three sources: Broadcast radio, face-to-face and, of course, amateur radio. Broadcast radio worked only if the transmitting stations had emergency power generation with sufficient fuel, but it required listeners to have use of mechanical, solar generation or batteries to power their receivers.

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A Historic Note

On December 23, 1900, Reginald Aubrey Fessenden sent and received the first intelligible speech by electromagnetic waves on a pair of masts 50 feet high and one mile apart on Cobb Island, Maryland. Fessenden was using a spark transmitter with the Kintner-Brashear interrupter. A fascinating biography of Fessenden is available on Wikipedia at <<https://tinyurl.com/jgl857p>>.

A fun article in a 2000 edition of the *Washington Post* discusses Fessenden and the recreation of the then 100-year-old radio event by a local radio club. See <<https://tinyurl.com/wyk2gc3>>.



Photo A. Electric power and communications are among the early casualties of wildfires in California... sometimes even before a fire breaks out! This 2017 photo shows a wildfire in Napa County, California. (US Air Force photo by Keith Johnson)



Photo B. Screen grab from the livestream of California's Saddle Ridge fire transmitted via AREDN by the Pleasant Valley Amateur Radio Club (PVARC). As you can see, this particular livestream ran nearly nine hours. The full video is on YouTube at <<https://tinyurl.com/qna4e8y>>.

Emergency Communications Preparedness Center

The Emergency Communications Preparedness Center (ECPC) is the federal interagency focal point for interoperable and operable communications coordination. Its members represent the federal government's broad role in emergency communications, including regulation, policy, operations, grants, and technical assistance.

The ECPC is comprised of 14 federal departments and agencies: U.S. Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, Interior, Justice, Labor, State, Transportation, and Treasury. The Federal Communications Commission and the General Services Administration are also members of the ECPC. Learn more about the ECPC at <<https://tinyurl.com/wp3knzt>>.

Two amateur radio groups used their knowledge of the Amateur Radio Emergency Data Network (AREDN) <www.arednmesh.org> to monitor wildfires in California. The Mariposa Area Amateur Radio Organization (MAARO) used the AREDN mesh to livestream video from the Briceburg Fire near Yosemite National Park <<https://tinyurl.com/up5vg47>>. The Pleasant Valley Amateur Radio Club (PVARC) built an AREDN mesh to livestream video from the Saddle Ridge Fire from a repeater site serving the San Fernando Valley <<https://tinyurl.com/qna4e8y>> (see Photo B).

Use of AREDN is not a new technique. The following is from the AREDN website from the 2018 fire season:

California Hams Provide Fire Videos
Local amateur radio operators are responding to the recent and ongoing fires in California in many ways. Several of these hams have built a high-speed multimedia AREDN mesh network which was used to deliver live streaming video of the fires in progress.

In Ventura County, Orv Breach W6BI, Paul Straus WD6EBY and Ben Kuo AL6YR installed high-definition cameras in their portion of the growing Southern California AREDN network. They were able to figure out how to send to live video stream across the mesh network to then Internet and finally to YouTube for public access.

Ben AL6YR reports that their mesh net-

work stayed operational even when the Spectrum cable, Internet access and phone system went down across the region. People were able to use the mesh network to keep updated on emergency information.

The start of the "Woolsey Fire" from Simi Valley, courtesy of Orv W6BI and the Pleasant Valley Amateur Radio Club <<https://tinyurl.com/sepyoyy>>.

The fire in Santa Paula, California (Briggs Fire), courtesy of Paul WD6EBY and the Pleasant Valley Amateur Radio Club <<https://tinyurl.com/sgum5a7>>.

The fire in Simi Valley, The Peak Fire, courtesy of Orv W6BI and the Pleasant Valley Amateur Radio Club <<https://tinyurl.com/uw7kmdq>>.

Note the length of some of these videos, proving the resilience and reliability of amateur radio and AREDN technologies.

Sacramento Valley Section Regional ARES reported over 1,800 ham radio manhours were dedicated to fire communications coverage.

Once again, amateur radio came through "when all else failed." We hope that the California government agencies and officials doubting the continued relevance of amateur radio communication (see last month's column) keep this in mind. Happy New Year!

If You Live in California...

Utilities in California are pre-emptively shutting off power to some customers to mitigate wildfire risk in particularly hazardous conditions (especially since power lines themselves have been implicated as the cause of several large fires). Pacific Gas & Electric offers these tips to its customers to be as prepared as possible:

How do you know if and when PG&E is shutting off your power? Update your contact information to ensure you receive timely alerts. The utility will notify customers at 48 hours, 24 hours, and just prior to shutting off power. Alerts will be sent through automated calls, texts, and emails. To update your contact information with PG&E, you can call (866) 743-6589. Even if you think PG&E has your information, be proactive and make sure it has your specific address on file and not only your Zip code.

If you are in a fire-prone area and not in a PG&E service area, contact your provider and confirm your contact information.

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